

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/14545

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C10G67/04

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C10G

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EP0-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 242 578 A (KOLSTAD JEFFREY J ET AL) 7 September 1993 (1993-09-07) column 7, paragraph 1 - column 8, paragraph 1; claim 1; figures 4, 8 column 14, last paragraph column 15, paragraph 3 ---	1, 4-19, 22, 23
A	US 3 723 294 A (GLEIM W ET AL) 27 March 1973 (1973-03-27) column 6, paragraph 1 - paragraph 2; claim 1 ---	1
A	US 4 640 762 A (SOUHRADA FRANK ET AL) 3 February 1987 (1987-02-03) column 3, paragraph 2 - paragraph 4; figure 1 --- -/-	2

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

26 April 2004

Date of mailing of the international search report

04/05/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Gilliquet, J-N

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/14545

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 01/60952 A (EXXONMOBIL RES & ENG CO) 23 August 2001 (2001-08-23) claim 1; figure 1 -----	1
A	US 4 400 264 A (KWANT PIETER B ET AL) 23 August 1983 (1983-08-23) claims 1,2; figures 1-3 -----	1

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/14545

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5242578	A	07-09-1993	CA 2064338 A1	24-09-1993
			US 5013427 A	07-05-1991
			US 5124026 A	23-06-1992
			US 5124027 A	23-06-1992
			US 5124025 A	23-06-1992
			US 5312543 A	17-05-1994
			EP 0434799 A1	03-07-1991
			JP 2804369 B2	24-09-1998
			JP 4501879 T	02-04-1992
			WO 9101360 A1	07-02-1991
			US 5228978 A	20-07-1993
			US 5258117 A	02-11-1993
			CA 2035875 A1	19-01-1991
			MX 170689 B	07-09-1993
US 3723294	A	27-03-1973	AR 211222 A1	15-11-1977
			AU 474457 B2	22-07-1976
			AU 4786772 A	26-04-1974
			CA 982967 A1	03-02-1976
			DD 103923 A5	12-02-1974
			DE 2250822 A1	30-05-1973
			DE 2265477 B1	07-02-1980
			DK 143810 B	12-10-1981
			EG 10771 A	30-06-1976
			ES 407701 A1	16-10-1975
			FI 55210 B	28-02-1979
			FR 2156777 A1	01-06-1973
			GB 1391720 A	23-04-1975
			HU 168328 B	28-03-1976
			JP 870113 C	13-07-1977
			JP 48075606 A	12-10-1973
			JP 51033563 B	20-09-1976
			NL 7214077 A ,B,	24-04-1973
			NO 136155 B	18-04-1977
			PL 90715 B1	31-01-1977
			SE 374387 B	03-03-1975
			SU 446127 A3	05-10-1974
			YU 258972 A ,B	30-04-1980
			ZA 7207434 A	29-08-1973
US 4640762	A	03-02-1987	CA 1222471 A1	02-06-1987
			DE 3667179 D1	04-01-1990
			EP 0216448 A1	01-04-1987
			JP 62030189 A	09-02-1987
			NL 8601695 A	16-01-1987
WO 0160952	A	23-08-2001	AU 3823501 A	27-08-2001
			CA 2398252 A1	23-08-2001
			CN 1400997 T	05-03-2003
			EP 1268713 A1	02-01-2003
			JP 2003523451 T	05-08-2003
			WO 0160952 A1	23-08-2001
			US 2002005374 A1	17-01-2002
US 4400264	A	23-08-1983	NL 8201119 A	17-10-1983
			AU 555121 B2	11-09-1986
			AU 1250583 A	22-09-1983
			CA 1195638 A1	22-10-1985

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/14545

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4400264	A	DE 3361368 D1	16-01-1986
		EP 0090437 A1	05-10-1983
		ES 8401515 A1	01-03-1984
		JP 58201889 A	24-11-1983
		MX 162350 A	26-04-1991
		SU 1424740 A3	15-09-1988
		ZA 8301834 A	30-11-1983